

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-2. (Canceled)

3. (Currently Amended) A light-emitting device having a plurality of pixels, each of said plurality of pixels comprising:

a source signal line, n (n is a natural number, $2 \leq n$) writing gate signal lines, n reading gate signal lines, n writing transistors, n reading transistors, $n \times m$ memory circuits for storing n-bit digital image signals for m frames (m is a natural number, $1 \leq m$), n writing memory circuit selection portions, n reading memory circuit selection portions, a current supply line, an EL driving transistor, and an EL element, wherein:

gate electrodes of said n writing transistors are electrically connected to different ones of said n writing gate signal lines, one of a source region and a drain region of each of said n writing transistors is electrically connected to said source signal line, and the other of the source region and the drain region of each of said n writing transistors is electrically connected to signal input portions of said n writing memory circuit selection portions;

each of said n writing memory circuit selection portions includes m signal output portions, with said m signal output portions being respectively and electrically connected to signal input portions of different memory circuits;

each of said n reading memory circuit selection portions includes m signal input portions, with said m signal input portions being respectively and electrically connected to signal output portions of said different memory circuits; and

gate electrodes of said n reading transistors are electrically connected to different ones of said n reading gate signal lines, one of a source region and a drain region of each of said n reading transistors is electrically connected to different signal output portions of said n reading memory circuit selection portions, the other of the source region and the drain region of each of

said n reading transistors is electrically connected to a gate electrode of said EL driving transistor, one of a source region and a drain region of said EL driving transistor is electrically connected to said current supply line, and the other of the source region and the drain region of said EL driving transistor is electrically connected to one electrode of said EL element.

4. (Currently Amended) A light-emitting device having a plurality of pixels, each of said plurality of pixels comprising:

n (n is a natural number, $2 \leq n$) source signal lines, a writing gate signal line, n reading gate signal lines, n writing transistors, n reading transistors, n x m memory circuits for storing n-bit digital image signals for m frames (m is a natural number, $1 \leq m$), n writing memory circuit selection portions, n reading memory circuit selection portions, a current supply line, an EL driving transistor, and an EL element, wherein:

gate electrodes of said n writing transistors are electrically connected to said writing gate signal line, one of a source region and a drain region of each of said n writing transistors is electrically connected to a different one of said n source signal lines, the other of the source region and the drain region of each of said n writing transistors is electrically connected to signal input portions of said n writing memory circuit selection portions;

each of said n writing memory circuit selection portions includes m signal output portions, with said m signal output portions being respectively and electrically connected to signal input portions of different memory circuits;

each of said n reading memory circuit selection portions includes m signal input portions, with said m signal input portions being respectively and electrically connected to signal output portions of said different memory circuits; and

gate electrodes of said n reading transistors are electrically connected to any different one of said n reading gate signal lines, one of a source region and a drain region is electrically connected to different signal output portions of said n reading memory circuit selection portions, the other of the source region and the drain region of each of said n reading transistors is electrically connected to a gate electrode of the EL driving transistor, one of a source region and

a drain region of said EL driving transistor is electrically connected to said current supply line, and the other of the source region and the drain region of said EL driving transistor is electrically connected to one electrode of said EL element.

5. (Previously Presented) A light-emitting device according to claim 3, wherein:

each of said writing memory circuit selection portions selects any one of said memory circuits, and is electrically connected to one of said source region and said drain region of said writing transistor to write said digital image signal into said selected memory circuit; and

each of said reading memory circuit selection portions selects any one of said memory circuits in which said digital image signal is stored, and is electrically connected to one of said source region and said drain region of said reading transistor to read out said stored digital image signal.

6. (Original) A light-emitting device according to claim 3, further comprising:

shift registers for sequentially outputting sampling pulses in accordance with a clock signal and a start pulse;

first latch circuits for holding said n-bit (n is a natural number, $2 \leq n$) digital image signals in accordance with said sampling pulses;

second latch circuits to which said n-bit digital image signals held in said first latch circuits are transferred; and

bit signal selection switches for sequentially selecting said n-bit digital image signals transferred to said second latch circuits for each bit and for outputting said n-bit digital image signals to said source signal line.

7. (Original) A light-emitting device according to claim 4, further comprising:

shift registers for sequentially outputting sampling pulses in accordance with a clock signal and a start pulse; and

first latch circuits for holding 1-bit digital image signals of said n-bit (n is a natural number, $2 \leq n$) digital image signals in accordance with said sampling pulses and for outputting said 1-bit digital image signals to said source signal lines.

8-13. (Canceled)

14. (Currently Amended) A driving method of a light-emitting device for displaying an image using n-bit (n is a natural number, $2 \leq n$) digital image signals, said light-emitting device comprising a source signal line driver circuit, a gate signal line driver circuit, and a plurality of pixels,

said method comprising:

outputting sampling pulses from shift register circuits, and inputting said sampling pulses into latch circuits in said source signal line driver circuits;

holding said digital image signals in accordance with said sampling pulses in said latch circuits;

transferring said digital image signals into source signal lines by bit signal selection switches;

outputting a gate signal line selection pulse from said gate signal line driver circuit, and selecting a gate signal line;

writing said n-bit digital image signals inputted from said source signal line into memory circuits at a row where said gate signal line is selected; and

reading out said n-bit digital image signals stored in said memory circuits in each of said plurality of pixels.

15. (Currently Amended) A driving method of a light-emitting device for displaying an image using n-bit (n is a natural number, $2 \leq n$) digital image signals, said light-emitting device comprising a source signal line driver circuit, a gate signal line driver circuit, and a plurality of pixels,

said method comprising:

outputting sampling pulses from shift registers, and inputting said sampling pulses into latch circuits in said source signal line driver circuits;

holding said digital image signals in accordance with said sampling pulses in said latch circuits;

transferring said digital image signals into source signal lines by bit signal selection switches;

outputting a gate signal line selection pulse from said gate signal line driver circuit, and sequentially selecting said gate signal lines from a first row; and

sequentially writing said n-bit digital image signals from said first row into each of said plurality of pixels.

16. (Currently Amended) A driving method of a light-emitting device for displaying an image using n-bit (n is a natural number, $2 \leq n$) digital image signals, said light-emitting device comprising a source signal line driver circuit, a gate signal line driver circuit, and a plurality of pixels,

said method comprising:

outputting sampling pulses from shift registers, and inputting said sampling pulses into latch circuits in said source signal line driver circuits;

holding said digital image signals in accordance with said sampling pulses in said latch circuits;

transferring said digital image signals into source signal lines by bit signal selection switches;

outputting a gate signal line selection pulse from said gate signal line driver circuit, and selecting an arbitrary gate signal line; and

writing said n-bit digital image signals into each of said plurality of pixels at an arbitrary row where said gate signal line is selected.

17. (Original) A driving method of a light-emitting device according to claim 14, wherein in a display period of a still picture, said n-bit digital image signals stored in said memory circuits are repeatedly read out to display said still picture, and said source signal line driver circuit is stopped.

18. (Previously Presented) A driving method according to claim 14, wherein said light-emitting device is an electro-luminescence display device.

19. (Currently Amended) A driving method according to claim 14, wherein said light-emitting device is incorporated in one selected from the group consisting of a video camera, a personal computer, a portable telephone, a head-mount display, a digital camera, and a portable electronic book.

20. (Previously Presented) A light-emitting device according to claim 4, wherein:
each of said writing memory circuit selection portions selects any one of said memory circuits, and is electrically connected to one of said source region and said drain region of said writing transistor to write said digital image signal into said selected memory circuit; and
each of said reading memory circuit selection portions selects any one of said memory circuits in which said digital image signal is stored, and is electrically connected to one of said source region and said drain region of said reading transistor to read out said stored digital image signal.

21. (Canceled)

22. (Previously Presented) A light-emitting device according to claim 3, wherein said memory circuits are static memories (SRAM).

23. (Previously Presented) A light-emitting device according to claim 4, wherein said memory circuits are static memories (SRAM).

24. (Canceled)

25. (Previously Presented) A light-emitting device according to claim 3, wherein said memory circuits are ferroelectric memories (FeRAM).

26. (Previously Presented) A light-emitting device according to claim 4, wherein said memory circuits are ferroelectric memories (FeRAM).

27. (Canceled)

28. (Previously Presented) A light-emitting device according to claim 3, wherein said memory circuits are dynamic memories (DRAM).

29. (Previously Presented) A light-emitting device according to claim 4, wherein said memory circuits are dynamic memories (DRAM).

30. (Canceled)

31. (Previously Presented) A light-emitting device according to claim 3, wherein said memory circuits are formed over one selected from the group consisting of a glass substrate, a plastic substrate, a stainless substrate, and a single crystal wafer.

32. (Previously Presented) A light-emitting device according to claim 4, wherein said memory circuits are formed over one selected from the group consisting of a glass substrate, a plastic substrate, a stainless substrate, and a single crystal wafer.

33. (Canceled)

34. (Previously Presented) A light-emitting device according to claim 3, wherein said light-emitting device is an electro-luminescence display device.

35. (Previously Presented) A light-emitting device according to claim 4, wherein said light-emitting device is an electro-luminescence display device.

36. (Canceled)

*B1
C1*
37. (Currently Amended) A light-emitting device according to claim 3, wherein said light-emitting device is incorporated in one selected from the group consisting of a video camera, a personal computer, a portable telephone, a head-mount display, a digital camera, and a portable electronic book.

38. (Currently Amended) A light-emitting device according to claim 4, wherein said light-emitting device is incorporated in one selected from the group consisting of a video camera, a personal computer, a portable telephone, a head-mount display, a digital camera, and a portable electronic book.

39. (Previously Presented) A driving method according to claim 15, wherein said light-emitting device is an electro-luminescence display device.

40. (Previously Presented) A driving method according to claim 16, wherein said light-emitting device is an electro-luminescence display device.

41. (Currently Amended) A driving method according to claim 15, wherein said light-emitting device is incorporated in one selected from the group consisting of a video camera, a personal computer, a portable telephone, a head-mount display, a digital camera, and a portable electronic book.

B1
Canceled

42. (Currently Amended) A driving method according to claim 16, wherein said light-emitting device is incorporated in one selected from the group consisting of a video camera, a personal computer, a portable telephone, a head-mount display, a digital camera, and a portable electronic book.

43. (Canceled)

44. (Previously Presented) The light-emitting device of claim 3, wherein $m > 1$.

45. (Previously Presented) The light-emitting device of claim 4, wherein $m > 1$.